

In the Claims

The claims have been amended as follows:

1 Claim 1 (previously presented) A composite comprising:
2 a first substrate;
3 a bonded mixture, said bonded mixture comprising a mixture of binder particles
4 and super-absorbent polymer particles, wherein said binder particles are on
5 average smaller than said super-absorbent polymer particles, and wherein at
6 least some of said binder particles coalesce at least some of said super-
7 absorbent polymer particles to each other and to said substrate; and
8 a three-dimensional array of elongated channels within said composite, formed
9 after the super-absorbent polymer particles contact a liquid, which promote
10 liquid acquisition into said composite along the three-dimensional array of
11 elongated channels prior to liquid absorption by the super-absorbent
12 polymer particles.

1 Claim 2 (original) The composite of claim 1, wherein at least some of said
2 bonded mixture has the property of collecting liquid within said three-dimensional
3 array, and the collected liquid in said array is absorbed by at least some of said
4 bonded mixture.

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1 Claim 3 (original) The composite of claim 1, further comprising a second
2 substrate, and said bonded mixture l
3 s between said first substrate and said second substrate, and wherein at least some
4 of said binder particles coalesce at least some of said bonded mixture to said
5 second substrate.

1 Claim 4 (original) The composite of claim 1, wherein said bonded mixture has a
2 dry thickness of less than about 2 millimeters.

1 Claim 5 (original) The composite of claim 3, wherein said bonded mixture has a
2 dry thickness of less than about 2 millimeters.

1 Claim 6 (original) The composite of claim 1, wherein a liquid permeable
2 acquisition layer is in liquid communication with said bonded mixture.

1 Claim 7 (original) The composite of claim 3, wherein a liquid permeable
2 acquisition layer is in liquid communication with said bonded mixture.

1 Claim 8 (original) The composite of claim 1, wherein said first substrate is semi-
2 permeable or impermeable to liquid.

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1 Claim 9 (original) The composite of claim 3, wherein said first substrate and said
2 second substrate are either semi-permeable to liquid, impermeable to liquid, or a
3 combination thereof.

1 Claim 10 (previously presented) A method of absorbing liquid comprising the
2 steps of:

3 a) placing a composite adjacent to a liquid source, wherein said composite
4 comprises

5 a first substrate and a bonded mixture, said bonded mixture comprising

6 a mixture of binder particles,

7 super-absorbent polymer particles, and

8 a three-dimensional array of elongated channels within said composite

9 formed after contact with a liquid from said liquid source,

10 wherein said binder particles are on average smaller than said super-

11 absorbent polymer particles, and wherein at least some of said binder

12 particles coalesce at least some of said bonded mixture to said substrate,

13 (b) acquiring the liquid into the composite along the three-dimensional array of

14 elongated channels; and

15 b) absorbing the liquid by means of at least some of said bonded mixture.

1 Claim 11 (previously presented) The method of claim 10, wherein at least some
2 of said bonded mixture collects liquid from said liquid source within said three-

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3 dimensional array, and the collected liquid in said array is absorbed by at least
4 some of said bonded mixture.

1 Claim 12 (original) The method of claim 10, wherein said composite further
2 comprises a second substrate, and said bonded mixture is between said first
3 substrate and said second substrate, and wherein at least some of said binder
4 particles coalesce at least some of said bonded mixture to said second substrate.

1 Claim 13 (original) The method of claim 10, wherein said bonded mixture has a
2 dry thickness of less than about 2 millimeters.

1 Claim 14 (original) The method of claim 12, wherein said bonded mixture has a
2 dry thickness of less than about 2 millimeters.

1 Claim 15 (original) The method of claim 10, further comprising a liquid
2 permeable acquisition layer in liquid communication with said bonded mixture.

1 Claim 16 (original) The method of claim 12, further comprising a liquid
2 permeable acquisition layer in liquid communication with said bonded mixture.

1 Claim 17 (previously presented) A liquid absorbent pad which comprises:
2 an outer layer of a substantially liquid-impervious material having an outer
3 surface and an inner surface;

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4 at least one composite segment positioned on said inner surface of said liquid
5 impervious material, said at least one composite segment comprising:
6 a first substrate and a bonded mixture, said bonded mixture comprising a
7 mixture of binder particles and super-absorbent polymer particles,
8 wherein said binder particles are on average smaller than said super-
9 absorbent polymer particles, and wherein at least some of said binder
10 particles coalesce at least some of said bonded mixture to said substrate;
11 and
12 a three-dimensional array of elongated channels within said at least one
13 composite segment after said at least one composite segment is contacted
14 with a liquid; and
15 a liquid-permeable acquisition layer in liquid communication with said at least
16 one composite segment, wherein at least a portion of said outer layer and
17 said liquid permeable acquisition layer are directly or indirectly attached,
18 and said at least one composite segment is sandwiched therebetween.

1 Claim 18 (original) The liquid absorbent pad of claim 17, wherein said at least
2 one composite segment further comprises a second substrate, and said bonded
3 mixture is between said first substrate and said second substrate, and wherein at
4 least some of said binder particles coalesce at least some of said bonded mixture to
5 said second substrate.

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1 Claim 19 (original) The liquid absorbent pad of claim 17, wherein said at least
2 one composite segment has a bonded mixture having a dry thickness of less than
3 about 2 millimeters.

1 Claim 20 (original) The liquid absorbent pad of claim 18, wherein said at least
2 one composite segment has a bonded mixture having a dry thickness of less than
3 about 2 millimeters.

1 Claim 21 (previously added) A liquid absorbent pad comprising:
2 a substantially liquid-impervious material having an outer surface and an inner
3 surface;
4 a composite positioned on the inner surface of said substantially liquid
5 impervious material, said composite comprising a first substrate and a
6 bonded mixture, the bonded mixture comprising a mixture of binder
7 particles and super-absorbent polymer particles, wherein the binder particles
8 are on average smaller than the super-absorbent polymer particles, and
9 wherein at least some of the binder particles coalesce at least some of the
10 bonded mixture to the first substrate;
11 a three-dimensional array of elongated channels within said composite when
12 said liquid absorbent pad is contacted with a liquid.

1 Claim 22 (previously added) A liquid absorbent pad of claim 21 wherein the
2 three-dimensional array of elongated channels within the composite acquire any

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3 liquid in contact with said liquid absorbent pad into said composite prior to
4 absorption of the liquid by the super-absorbent polymer particles.

1 Claim 23 (previously added) The liquid absorbent pad of claim 21, wherein
2 said composite further comprises a second substrate, and said bonded mixture is
3 between said first substrate and said second substrate, and wherein at least some of
4 said binder particles coalesce at least some of said bonded mixture to said second
5 substrate.

1 Claim 24 (previously added) The liquid absorbent pad of claim 22, wherein
2 said composite has a bonded mixture having a dry thickness of less than about 2
3 millimeters.

1 Claim 25 (previously added) The liquid absorbent pad of claim 21, wherein
2 said composite has a bonded mixture having a dry thickness of less than about 2
3 millimeters.